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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,701	03/07/2002	Tsuneco Maki	2271/66868	2539

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EXAMINER

HUFFMAN, JULIAN D

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/092,701

Applicant(s)

MAKI ET AL.

Examiner

Julian D. Huffman

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7,9-47 and 49-72 is/are allowed.
- 6) ☒ Claim(s) 8,48 and 73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 73 is rejected under 35 U.S.C. 102(b) as being anticipated by Bannai et al.

Bannai et al. disclose a recording medium conveying device conveying a recording medium, comprising :

a conveying belt (fig. 1, element 2) wound around a driving roller (4') and a driven roller (4) so as to convey said recording medium, the conveying belt having an insulating layer (fig. 9, element 2a) formed at at least a side contacting said recording medium; and

a belt charging unit (3) provided in contact with said conveying belt and in a vicinity of a separating unit (fig. 11, element 19, column 5, lines 61-62) and said driving roller so as to charge said conveying belt with a positive charge and a negative charge alternately in a moving direction of said conveying belt by applying an AC bias (5) to said conveying belt, the belt charging unit including a charge roller pressed onto said conveying belt.

The limitation that the conveying device is for feeding media to an image forming device does not further limit the invention of claim 73 which is a conveying device.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasmussen et al. in view of Bannai et al. and Matsuoka.

Rasmussen et al. disclose an ink jet recording device conveying a recording medium to an image recording part, the recording medium being separated and fed from a recording-medium feeding device by a separating unit thereof, the recording device comprising:

a recording head (12) mounted on a carriage (column 1, lines 24-27) in an image recording part so as to record an image by jetting ink drops on a recording medium;

a recording medium conveying device including:

a conveying belt (32) wound around a driving roller (38) and a driven roller (40) so as to convey said recording medium to said image recording part.

Rasmussen et al. do not disclose the belt charging unit and separating unit or grip roller projections on the driven roller.

Bannai et al. disclose a separating unit (19) and a belt charging system (fig. 1, element 3) in contact with a belt with an insulating layer (fig. 9, element 2a) and a conductive layer (2b), so as to charge said insulating layer with a positive charge and a

negative charge alternately in a moving direction of said conveying belt by applying AC bias (5) to the conveying belt.

Matsuoka discloses providing projections on a driving roller and a driven roller which mate with perforations on a belt (column 6, lines 51-62 and fig. 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the belt charging system and separating unit of Bannai et al. and the roller projections of Matsuoka into the invention of Rasmussen et al. The reasons for performing the modifications would have been to provide a device capable of surely retaining and transporting a sheet member by a simple construction, while positioning the sheet member accurately relative to a transporting means thereof, and enabling automatic feeding of multiple sheets without user intervention as taught by Bannai et al. (column 4, lines 55-58), and to prevent the driving roller from slipping relative to the endless belt or from idling (column 6, lines 56-59), as taught by Matsuoka.

### ***Response to Arguments***

5. Applicant's arguments regarding claims 1, 2, 4, 6, 10, 12, 20-23, 27-31, 33, 35, 37, 40-42, 44, 46, 50, 52, 56, 58-62 and 66-70 are persuasive.

Applicant's argument regarding claim 73 has been considered and is respectfully deemed not persuasive. The limitation that the belt charging unit is in the vicinity of the separating unit and driving roller is taught by the prior art of record.

The limitation is broad and does not require the charge roller to press the belt against the driving roller.

Applicant has not presented specific arguments directed towards claims 8 and 48 and the previous rejection of these claims is maintained and deemed proper.

***Allowable Subject Matter***

**6.** Claims 1-7, 9-47 and 49-72 are allowed.

With regards to claims 1, 2, 4, 6, 10, 12, 20-23, 27-31, 33, 35, 37, 40-42, 44, 46, 50, 52, 56, 58-62 and 66-70, applicant's argument on page 41 of the response/amendment is persuasive, the prior art of record does not disclose the claimed first length greater than the second length in the combination. It is also not clear from Bannai et al. at which point the recording medium separates from the separating unit.

With regards to claims 14 and 54, the prior art of record does not disclose the driving roller and driven roller having different diameters, as claimed in the combination.

With regards to claims 16-19 the prior art of record does not disclose the driving roller connected to ground, as claimed in the combination.

With regards to claims 24 and 63, the prior art does not disclose the claimed volume resistivity in the combination.

With regards to claims 3, 5, 7, 9, 11, 13, 15, 25, 26, 32, 34, 36, 43, 45, 47, 49, 51, 53, 55, 57, 64 and 65, the prior art of record does not disclose the conveying belt being formed narrower than the recording medium as claimed in the combination.

With regards to claims 38, 39, 71 and 72, the prior art of record does not disclose the value being obtained by dividing a maximum resolution of an image to be recorded on said recording medium by  $n$ , where  $n$  is an integer larger than zero.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (703) 308-6556 **until February 11<sup>th</sup>, 2004**, upon which date the number will be changed to (571)272-2147. The examiner can generally be reached Monday through Friday from 9:00 a.m. to 5:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, can be reached at (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



JH

January 29, 2004



**Thinh Nguyen**  
**Primary Examiner**  
**Technology Center 2800**